

THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

BRIDGESTONE SPORTS CO., LTD.,	)	
and BRIDGESTONE GOLF, INC.,	)	
	)	
Plaintiffs,	)	C. A. No. 05-132 (JJF)
	)	
v.	)	
	)	<b>PUBLIC VERSION</b>
ACUSHNET COMPANY,	)	
	)	
Defendant.	)	

ACUSHNET'S MEMORANDUM IN SUPPORT OF ITS  
MOTION FOR SUMMARY JUDGMENT OF NON-INFRINGEMENT  
OF U.S. PATENT NO. 5,252,652

OF COUNSEL:

Alan M. Grimaldi  
Joseph P. Lavelle  
Kenneth W. Donnelly  
Brian S. Seal  
HOWREY LLP  
1299 Pennsylvania Avenue, N.W.  
Washington, DC 20004  
Tel: (202) 783-0800

Richard L. Horwitz (#2246)  
David E. Moore (#3983)  
POTTER ANDERSON & CORROON LLP  
Hercules Plaza, 6<sup>th</sup> Floor  
1313 North Market Street  
P. O. Box 951  
Wilmington, DE 19899-0951  
Tel: (302) 984-6000  
rhorwitz@potteranderson.com  
dmoore@potteranderson.com

*Attorneys for Defendant  
Acushnet Company*

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Defendant Acushnet Company ("Acushnet") files this Memorandum in Support of Its Motion for Summary Judgment of Non-Infringement of U.S. Patent No. 5,252,652 ("the '652 patent") (Ex. 1).

## **I. INTRODUCTION**

Plaintiffs Bridgestone Sports Co. Ltd. and Bridgestone Golf, Inc. ("Bridgestone") accuse Acushnet of infringing the '652 patent with respect to eight Acushnet model golf balls: Pinnacle Exception; Titleist DT SoLo; Titleist PT So/Lo; NXT Tour; NXT; Pro V1x; Pro V1\* and the Pro V1. Bridgestone asserts infringement of claims 1, 3, 5 and 9 of the '652 patent. Claim 1 is the only independent claim in the patent, and as this motion will demonstrate, none of the accused products read on claim 1. Hence, Acushnet is entitled to judgment in its favor on the '652 patent as a matter of law.

## **II. NATURE AND STAGE OF PROCEEDINGS**

This suit involves eleven patents and is scheduled for trial, starting June 18, 2007. Bridgestone alleges that Acushnet infringes seven patents-in-suit. Acushnet alleges that Bridgestone infringes four patents-in-suit. Fact and expert discovery is finished and a pre-trial conference will be held on May 25, 2007. The Court has not yet issued a *Markman* decision as a step in construing the claims of the asserted patents, but held a *Markman* hearing on November 29, 2006. Under the Scheduling Order, as amended, case dispositive motions are now due, and briefing of dispositive motions must follow and be made "pursuant to D. Del. LR 7.1.2." (D.I. 219 at 1).

## **III. SUMMARY OF ARGUMENT**

Acushnet's Motion for Summary Judgment of Non-Infringement of the '652 patent can and should be resolved by applying several straightforward and often-utilized legal doctrines that limit the ability of patentees to expand patent claims beyond their clear meaning or fair scope. Black letter claim construction law precludes Bridgestone

from proving literal infringement. The doctrine of prosecution history estoppel prohibits it from asserting infringement of the '652 patent claims under the doctrine of equivalents.

Acushnet does not literally infringe claim 1 of the '652 patent because its accused products lack at least one of the following two claim limitations: "about 0.05 to about 2 parts by weight of a sulfur compound" and "about 25 to about 40 parts by weight of a zinc or magnesium salt of an unsaturated fatty acid having 3 to 4 carbon atoms."

Neither can Bridgestone establish infringement under the doctrine of equivalents, because it is estopped to contradict the statements and actions it made during prosecution of the '652 patent, which narrowed claim 1 to exclude embodiments such as the accused products. During prosecution, Bridgestone added the numerical limitations to the asserted claim in order to overcome the U.S. Patent Office's rejection over prior art. Therefore, Bridgestone is presumed to have surrendered all claim scope outside the specified numerical limitations; i.e., products with *more than* about 2 parts by weight of an organosulfur compound or *less than* about 25 parts of an unsaturated fatty acid. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 740 (2002) ("*Festo VIII*"). The file history reveals that Bridgestone attempted to claim broadly the subject matter regarding the organosulfur and unsaturated fatty acid limitations, but knowingly and intentionally abandoned that approach to claiming their invention, thereby forgoing any right to recapture the subject matter which they purposefully disclaimed.

Irrespective of the arguments above, the accused balls must all also meet the single rubber limitation of claim 1. Claim 1 of the '652 patent contains a Markush group which requires that the base rubber consist of one type of rubber, selected from the group consisting of polybutadiene, styrene-butadiene, polyisoprene and natural rubber. Bridgestone's use of the Markush group signifies that blends of such rubbers are not within the patent. For significant periods of the infringement period, however, Acushnet's accused products used blends of polybutadiene, polyisoprene and styrene-butadiene. For these time periods, Acushnet would further be entitled to judgment of

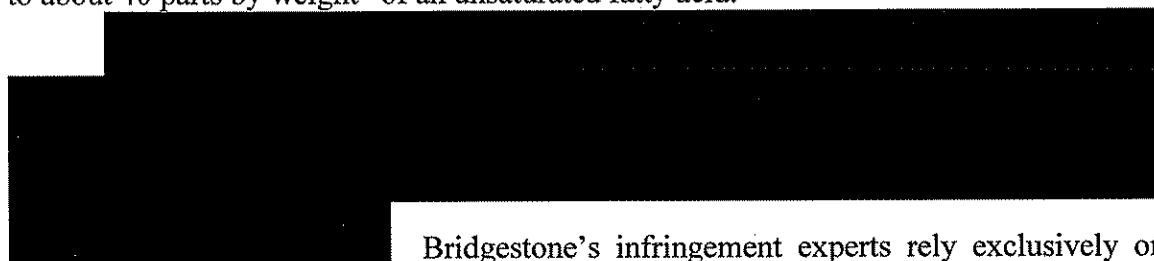


non-infringement as a matter of law. Bridgestone offers no opinion on infringement under the doctrine of equivalents with respect to this limitation.



Finally, Bridgestone should not be allowed to rely on the doctrine of equivalents in any case, for it strategically avoided disclosing to Acushnet the basis of its infringement contentions as they relate to the doctrine of equivalents during fact discovery in contravention of the Court's Orders.



























#### IV. STATEMENT OF FACTS





Bridgestone has accused eight different Acushnet model golf balls of infringing the '652 patent: Pinnacle Exception; Titleist DT SoLo; Titleist PT So/Lo; NXT Tour; NXT; Pro V1x; Pro V1\* and the Pro V1. Depending on the accused product, Acushnet does not infringe claim 1 of the '652 patent because it contains more than "about 2 parts by weight" of an organosulfur compound and/or because it contains less than "about 25 to about 40 parts by weight" of an unsaturated fatty acid."



Bridgestone's infringement experts rely exclusively on manufacturing guidelines manuals to determine infringement. Although Acushnet disputes that the manufacturing guidelines manuals contain an accurate core formulation of its accused products, the guidelines show, when interpreted properly, that none of Acushnet's accused products meet all of the limitations of the '652 patent:

Accused Product	"about 0.05 to about 2 parts by weight of" Zn-PCTP	"about 25 to about 40 parts by weight" of ZDA
Pinnacle Exception (2005-present) Ex. 3a- AB 0015321 – AB 0015337		

<b>Accused Product</b>	<b>“about 0.05 to about 2 parts by weight of” Zn-PCTP</b>	<b>“about 25 to about 40 parts by weight” of ZDA</b>
Pinnacle Exception (Sept. 2003-Aug. 2005) Ex. 3b – AB 0056201 – AB 0056217		
Pinnacle Exception (May 2003-Sept. 2003) Ex. 3c – AB 0015304 – AB 0015320		
Titleist DT SoLo (Sept. 2004-present) Ex. 3d – AB 0015291 – AB 0015303		
Titleist DT SoLo (Oct. 2002-Sept. 2004) Ex. 3e – AB 0015274 – AB 0015290		
NXT Tour (inner core) (Sept. 2004-present) Ex. 3f – AB 0015408 – AB 0015429		
NXT Tour (outer core) (Sept. 2004-present) Ex. 3f – AB 0015408 – AB 0015429		
NXT Tour (single core) (Oct. 2002-Sept. 2004) Ex. 3g – AB 0015391 – AB 0015407		
NXT (Oct. 2004-present) Ex. 3h – AB 0015356 – AB 0015373		
NXT (Oct. 2002-Oct. 2004) Ex. 3i – AB 0015338 – AB 0015355		
ProV1x (inner core) (all years) Ex. 3j – AB 0015471 – AB 0015497		
ProV1x (outer core) (all years) Ex. 3j – AB 0015471 – AB 0015497		
ProV1* (inner core) (all years) Ex. 3k – AB 0086603 – AB 0086626		
ProV1* (outer core) (all years) Ex. 3k – AB 0086603 – AB 0086626		

Accused Product	“about 0.05 to about 2 parts by weight of” Zn-PCTP	“about 25 to about 40 parts by weight” of ZDA
Pro V1 392 (Nov. 2004-present) Ex. 31 – AB 00 38532 – AB 0038560		
Pro V1 392 (Nov. 2002-Nov. 2004) Ex. 3m – AB 0015542 – AB 0015562		

## V. THE APPLICABLE LEGAL STANDARDS

### A. Summary Judgment Standards

Summary judgment should be granted when no “reasonable jury could return a verdict for the nonmoving party.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986); Fed.R.Civ.P. 56(c). The use of summary judgment is particularly appropriate in complex patent infringement actions because it is a useful tool to secure a just and speedy determination of the action and to simplify and pare down the issues in such complex cases. *See Celotex Corp. v. Catrett*, 477 U.S. 317, 327 (1986); *Nike Inc. v. Wolverine World Wide, Inc.*, 43 F.3d 644, 646 (Fed. Cir. 1994) (“Summary judgment is appropriate in a patent case, as in other cases, when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law.”)

### B. Literal Infringement Standards

Literal infringement is determined in a two-step analysis. The first step is determining the meaning and scope of the patent claims asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996).

Interpretation of the asserted claims is a question of law, and the court must determine the scope and meaning of the claims. *Id.* Claims are construed with reference to the claim language, the patent specification and the prosecution history, which together

constitute the “intrinsic” evidence. *Loctite v. Ultraseal*, 781 F.2d 861, 867 (Fed. Cir. 1985). When determining the scope and meaning of the patent claims, the language of the claims in light of the specification is considered first. *McGill, Inc. v. John Zink Co.*, 736 F.2d 666, 672 (Fed. Cir. 1984).

The patentee has the burden of proving infringement. *See Under Sea Indus., Inc. v. Dacor Corp.*, 833 F.2d 1551, 1557 (Fed. Cir. 1987). To meet its burden, the patentee must prove that the accused products contain every limitation of the asserted claim, either literally or by equivalence. *See S. Bravo Sys. v. Containment Techs. Corp.*, 96 F.3d 1372, 1376 (Fed. Cir. 1996). “If even one limitation is missing, there is no literal infringement.” *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1211 (Fed. Cir. 1998).

Where, as here, the nonmoving party has the burden of proof at trial, the moving party need only point to a lack of evidence and has no burden to disprove the nonmoving party’s claim. *See Celotex*, 477 U.S. at 325; *Exigent Tech., Inc. v. Atrana Solutions, Inc.*, 442 F.3d 1301, 1307-08 (Fed. Cir. 2006). The non-moving party must come forward with evidence demonstrating a genuine issue as to a material fact, and such evidence must consist not merely of denials or assertions that a fact is challenged. *See Celotex*, 477 U.S. at 324. If the non-moving party fails to make a sufficient factual showing as to any element of its case on which it bears the burden of proof at trial, the “plain language of Rule 56(c) mandates the entry of summary judgment.” *Id.* at 322.

### **C. Doctrine of Equivalence Standards**

If a product does not literally infringe the claims of an asserted patent, the product may still be found to infringe the patent under the doctrine of equivalents if there is “equivalence” between the accused product and each element of the patent’s claims. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950); *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 28 (1997); *Festo VIII*, 535

U.S. at 732. A claim limitation is equivalently present in an accused device if there are only “insubstantial differences” between the limitation and the corresponding aspect of the accused device. *CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000). Thus, the doctrine of equivalence allows the patentee to claim those “*unimportant* and *insubstantial* changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim.” *Festo VIII*, U.S. at 733 (emphasis added).

The doctrine of equivalents does not permit wholesale redrafting of a claim in order to capture an accused product; the deviation from the literal scope of the claim must be *insubstantial*, *Perkin-Elmer Corp. v. Westinghouse Elec. Corp.*, 822 F.2d 1528, 1532 (Fed. Cir. 1987). The test for determining whether differences are “insubstantial” is objective: whether a person with ordinary skill in the relevant art would find the differences to be “insubstantial.” *Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1519 (Fed. Cir. 1995), *rev’d on other grounds*, 520 U.S. 17 (1997).

Where the patent describes a narrow mechanical improvement in a crowded field, the scope of potential equivalents is narrow. *Texas Instruments, Inc. v. U.S. Int’l Trade Comm’n*, 805 F.2d 1558, 1563 (Fed. Cir. 1986).

There are several important legal principles that restrict the ability of a patentee to invoke the doctrine of equivalents to ensnare products that do not literally infringe a patent’s claims, including prosecution history estoppel. This restrictive principles applies particularly here, and it prohibits Bridgestone from relying on the doctrine of equivalents to establish infringement of the ‘652 patent.

## VI. CLAIM CONSTRUCTION ISSUES

Some of the terms in the asserted claims of the ‘652 patent are at issue in *Markman* proceedings before the Court. Specifically, the parties dispute the meaning of “about” and the meaning of the following phrase: “A base rubber selected from the

group consisting of polybutadiene rubber, natural rubber, polyisoprene rubber and styrene-butadiene rubber.” The Court held a *Markman* hearing to construe the disputed claim terms of the ‘652 patent on November 29, 2006, and has not yet issued its ruling.

#### **A. Construction of “About”**

With respect to “about,” both parties agree that this term means “approximately,” but dispute the extent to which it can be used to expand claimed numerical ranges in the patent. Claim 1 of the ‘652 patent requires “*about 25 to about 40 parts by weight of a zinc or magnesium salt of an unsaturated fatty acid having 3 to 8 carbon atoms.*” Similarly, claim 1 also requires “*about 0.05 to about 2 parts by weight of a sulfur compound*” and “*about 0.5 to about 3 parts by weight of an organic peroxide.*”

##### **1. Acushnet’s Proposed Construction of “About”**

Acushnet contends that “about” should be defined in terms of measurement precision of the values in question. (Ex. 4 – Acushnet Opening *Markman* Brief); *see BJ Servs. Co. Halliburton Energy Servs., Inc.*, 338 F.3d 1368 (Fed. Cir. 2003) (defining “about” as encompassing range of experimental error that occurs in any measurement).

Dr. David Felker, Acushnet’s infringement expert, determined that in 1989-90 (the filing date of the ‘652 patent) the potential measurement or manufacturing error associated with using ZDA would have been no greater than 0.25 phr, and the potential error associated with using PCTP would have been no greater than 0.06 phr. (*See* Ex. 5 – 2/20/07 Felker Report, pg.14-17). Under this analysis, “about 25 to about 40 parts” ZDA should be construed to mean 24.75 to 40.25 phr ZDA, and “about 0.05 to about 2 parts” PCTP should be construed to mean some amount of PCTP to 2.06 phr PCTP.

To make this determination, Dr. Felker relied on actual documentation relating to the weighing systems in use in 1989 and information obtained from individuals involved with the weighing systems in 1989. (Ex. 5 – Felker 2/20/07 Report, at pgs. 14-17).

On the other hand, none of Bridgestone's experts provided a numerical range of what "about" means in terms of measurement precision. Rather, Mr. Cadorniga simply stated that under Acushnet's proposed construction of "about" the limitation for PCTP and/or ZDA are satisfied literally and under the doctrine of equivalents because the "precision of measurement in 1989 would have included variability that would have included the amount of [PCTP or ZDA] used in the accused Acushnet golf balls." (Ex. 6 – 1/16/07 Cadorniga Report, pg. B-21). Apart from the absence of proffering any range of equivalents, Mr. Cadorniga provided no basis for his indefinite conclusion.

## 2. Bridgestone's Construction of "About"

Bridgestone contends that "about" should be defined broadly as "in the stylistic and technological context in which it is used." (Ex. 7 – Bridgestone Opening *Markman* Brief). Neither Bridgestone nor any of its experts, including Mr. Cadorniga, truly quantify the limits of their proposed construction. However, in his expert report, Mr. Cadorniga states that "about 2 parts" Zn-PCTP is broad enough to capture [REDACTED]

[REDACTED] In his deposition, he then further stretched the literal meaning of "about 2" to include, "he thinks," up to 2.9 parts:

Q: All right, let's talk about the upper range of the claimed PCTP. How high can you go, under your interpretations of about, which is consistent with Bridgestone's, and still be within the claimed range of about 2 parts organosulfur compound?

A: I'm putting a number to that, and I think I'll go all the way to 2.7, 2.9 even, as long as it's not three. Everything that's past two or about 2 could go as far as 2.9.

Q: And that's your understanding for what constitutes literal infringement?

A: Yes.

(Ex. 8 – 3/12/07 Cadorniga Tr. 113:15-114:5).



With respect to the ZDA limitation of the '652 patent, Cadorniga states in his report that "about 25 parts" [REDACTED] In his deposition, he then stretched this literal meaning of "about 25 to about 40" to include from 21 up to 45:

Q: Under your construction of the term about what is the maximum range, actual range, of ZDA or unsaturated fatty acid that a rubber core formulation or composition can have and still be within this claim literally?

A: *I believe* we can go as low as 22 and still be equivalent to 25, in that range, and *possibly* about 40, *maybe* up to 44, 45 as well.

(Ex. 8 – 3/12/07 Cadorniga Tr. 108:21-109:17)

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Q: Under literal infringement how low can you go on ZDA and still be within this claim?

A: I'm saying as low as 22. ... 21 – I'm sorry, let me put that back – 21, 22, in that range, I can go as low as that and still maintain or make adjustment in the formulation.

Q: So, 21 parts ZDA, in your opinion, is ... exactly the same as about 25?

A: I would say so, yes.

Q: And then, on the upper end of the range, how high will you go and still hold the opinion that the about of ZDA is about 40?

A: *Probably* as high as 44 to 45.

Q: And that's under literal infringement' correct?

A: That's under literal infringement.

(Ex. 8 – 3/12/07 Cadorniga Tr. 108:21-109:17)

With respect to the doctrine of equivalents, Mr. Cadorniga stated that the ranges would be even broader:



Q: Now, with respect to PCTP, what is the maximum level of PCTP that a rubber composition can have and still be considered to infringe under the doctrine of equivalents?

A: *I think it can go over three on that one*, and it will be in the doctrine of equivalents. Again the reason for that opinion is because the original patent didn't even have a range of these materials used.

(Ex. 8 – Cadorniga Tr. 118:7-15)

\*\*\*

Q: So, under the doctrine of equivalents, how high can you go with respect to ZDA and still, in your opinion, have a substantially equivalent product?

A: From what my – the number that I have given you *should be* over 45.

(Ex. 8 – Cadorniga Tr. 115:15-20)

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Q: For a doctrine of equivalents – a maximum range of ZDA?

A: Up to 50.

(Ex. 8 – Cadorniga Tr. 116:11-14)

\*\*\*

Q: Okay, what about the minimum amount of ZDA under the doctrine of equivalents?

A: Yeah, I have to down to 17 or 18.

(Ex. 8 – Cadorniga Tr. 116:15-17)

Cadorniga's interpretation of "about" is clearly overbroad and is not based on any substantive analysis, but rather just conjecture and speculation. In fact, during the course of the deposition, Mr. Cadorniga repeatedly changed his mind with respect to the limits of his proposed construction. "About" must provide some approach to exactness in number. *Conopco, Inc. v. May Dep't Stores, Co.*, 46 F.3d 1556 (Fed. Cir. 1994). "The meaning of about is dependent on the facts of the case, the nature of the invention, and

the knowledge imparted by the totality of the earlier disclosure to those skilled in the art.” *Eiselstein v. Frank*, 52 F.3d 1035 (Fed. Cir. 1995).

The solid golf ball is part of an extremely crowded art, with thousands of issued patents. If “about” is read as broadly as Cadorniga speculates, it would improperly encompass other patents.

For example, in 2003, Acushnet obtained a patent for a core formulation containing 2.20 phr Zn-PCTP. (Ex. 9 – U.S. Patent No. 6,635,716). The ‘652 patent is listed as one of the references cited on the cover page of the ‘716 patent, indicating that the PTO issued the ‘716 patent after considering the ‘652 patent and its claim to “about 2” phr rubber. The fact that the PTO considered a golf ball with 2.20 phr Zn-PCTP patently different from a ball with “about 2” phr Zn-PCTP is evidence that “about” should be interpreted narrowly in the context of adding components to a golf ball core formulation.

Furthermore, “about” should be interpreted narrowly due to the fact that the ‘652 patent itself indicates that the focus of the invention was not at the extreme limits of the claimed ranges. For example, the ‘652 patent states that the more preferred range of Zn-PCTP is “about 0.1 to about 0.5 parts” and every example uses only 0.2 phr Zn-PCTP. (Ex. 1 – ‘652 Patent, at col. 2 line 66 – col. 3 line 2). In his deposition, Mr. Cadorniga agreed that the ‘652 patent was attempting to claim the upper most range of where PCTP would have value. (Ex. 8 – 3/12/07 Cadorniga Tr. 102:2-7).

The inventor of the ‘652 patent, Yoshinori Egashira, specifically taught in a later patent that any amount beyond 1.5 parts PCTP negatively affects the core: “Pentachlorothiophenol or its salt is blended in an amount of about 0.2 to 1.5 parts by weight per 100 parts by weight of the base rubber in order that this blend system be enhanced in repulsion. *Beyond this range, the rubber composition for the core can be retarded in crosslinking reaction.*” (Ex. 10 – U.S. Patent No. 5,605,968) (emphasis added).

Bridgestone further taught in yet another patent that the amount of Zn-PCTP in a golf ball core should be “*not more than 2.0 parts by weight*, and preferably not more than 1.2 parts by weight, per 100 parts by weight of the base rubber.” (Ex. 11 – U.S. Patent 6,679,791, col. 2, lines 58-63) (emphasis added). Bridgestone explained restricting the amount of Zn-PCTP to less than 2.0 phr because “too much [Zn-PCTP] tends to lower the core hardness, which can adversely impact the feel of the ball when hit as well as its durability (cracking resistance).” (Ex. 11 – ‘791 patent, at col. 2, lines 63-65). These teachings by the inventor of the ‘652 patent and Bridgestone, that any amount of PCTP over 2.0 phr negatively affects the core, further reinforces the fact that “about” should be interpreted narrowly.

In their depositions, both of Bridgestone’s infringement experts agreed that the scope of the claimed PCTP or ZDA should not be so great as to encompass golf balls with substantial changes in physical properties, such as compression.

Q: All right. I think what I heard you say, though, is that you would look for a change in the physical property target is that correct?

A: Not a change, but a deviation from a performance target.

Q: And when you would have that deviation or change from a performance target that is where that you would stop the expansion of the claim scope; correct?

A: In some respect, yes.

(Ex. 8 – 3/12/07 Cadorniga Tr. 96:6-17).

Bridgestone’s other infringement expert, Dr. Coughlin, similarly agreed:

Q: Okay. And now let’s take it to a different situation, in which you add a certain amount of extra PCTP, and it does result in significant changes, for example, the compression changes, substantially. I think what I understand from your testimony is that in that case you would not expand the scope of the claim to encompass that range; is that correct?

A: Yes. So that if this additional component, this delta, this difference above five, led to a substantial change, that would be beyond, I guess, the scope of the point one to five that fits in this claim.

(Ex. 12 – 3/6/07 Coughlin Tr. 130:6-17).<sup>1</sup>

The Federal Circuit has also held that it is appropriate to consider the effect of varying the claimed amount of the qualified limitation to determine the meaning of “about.” See *Pall Corp. v. Micron Separations, Inc.*, 66 F.3d 1211 (Fed. Cir. 1995).

Therefore, to determine what amount of ZDA would result in a substantial and significant change to the properties of a golf ball, Dr. Felker requested Acushnet engineers to test the effect of varying the amount of ZDA in golf ball cores. (Ex. 5 – 2/20/07 Felker Report, pg. 20-21; Ex. 2– 4/13/07 Dalton Decl. ¶ 16-18). The NXT formulation was used for the test at eight different levels of ZDA content,

*Id.* The cores were tested to determine the resulting coefficient of restitution, the Atti compression and the hardness. The results are summarized in the table below (Ex. 5 – 2/20/07 Felker Report, pg. 20-21 and Exhibit 8; Ex. 2 – 4/13/07 Dalton Decl. ¶ 16-18 and Exhibit A):

ZDA Level	Coefficient of Restitution	Atti Compression	Hardness as Deflection (in mm under 100kg load)	
			Core	Ball
17.5	0.785	27	5.15	4.19
20	0.785	37.8	4.55	3.77
22.5	0.785	45.7	4.19	3.45
25	0.791	57.3	3.71	3.13
27.5	0.797	66	3.33	2.82
30	0.801	70.7	3.19	2.73
35	0.799	86.25	2.65	2.31
40	0.798	97.4	2.27	2.01

<sup>1</sup> Dr. Coughlin provided his testimony with respect to claim 1 of the ‘961 patent, which requires the core composition to include 0.5 to 5 parts of an organosulfur compound. Dr. Coughlin’s testimony applies equally to the ‘652 patent.

This study shows that the coefficient of restitution, the Atti compression and the hardness of a core change dramatically with the addition of ZDA and that a golf ball with 22.5 phr ZDA is significantly different from a golf ball with 25 phr ZDA.

The '652 patent supports the fact that such changes are substantial. In describing the claimed "improved rebound property," the '652 patent reports a hardness difference (measured as a deflection under a 100 kg load) of 0.02mm between the prior art and a golf ball made according to the '652 patent. (Ex. 1 – '652 patent, col. 4, lines 45-60). Further, in describing the claimed "improved initial velocity," the '652 patent reports a 0.22% increase in the initial velocity of the core (73.11 m/s to prior art's value of 72.95 m/s), and a 0.72% increase in the initial velocity of the finished ball (73.37 m/s to the prior art's value of 72.84 m/s), over the prior art. (Ex. 1 – '652 patent, col. 4, lines 45-60). Mr. Cadorniga agreed that this indicates that these numbers show a significant difference in initial velocity. (Ex. 8 – 3/12/07 Cadorniga Tr. 127:11-19).

The results of the ZDA fluctuation study show even more significant differences to a core's "rebound" and "initial velocity" than those reported in the '652 patent. For example, the ZDA study shows that by changing the amount of ZDA from 25 phr to 22.5 phr the core deflection changed 0.48 mm; the ball deflection changed 0.32 mm; the core coefficient of restitution<sup>2</sup> changed 0.759 %; and the core compression changed 11.6 Atti compression points. (Ex. 5 – 2/20/07 Felker Report, pg. 20-21 and Exhibit 8).

This shows that the addition of small amounts of ZDA results in substantial and significant effects to the core and the ball, a point that Mr. Cadorniga agrees with (Ex. 6 –


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<sup>2</sup> There is a direct correlation between initial velocity and the coefficient of restitution. Cadorniga acknowledges this fact in his report, where he states "a high CoR value correlates to high initial velocity." (Ex. 6 – 1/16/07 Cadorniga Report, pg. B-6, fn. 10). Therefore, it is appropriate to compare the percent increase of initial velocity discussed in the '652 patent to the percent increase of the CoR values shown in the ZDA and Zn-PCTP fluctuation studies.

1/16/07 Cadorniga Report, at pg. B-4), and further supports the narrow construction of “about” as it relates to adding components to a golf ball core.

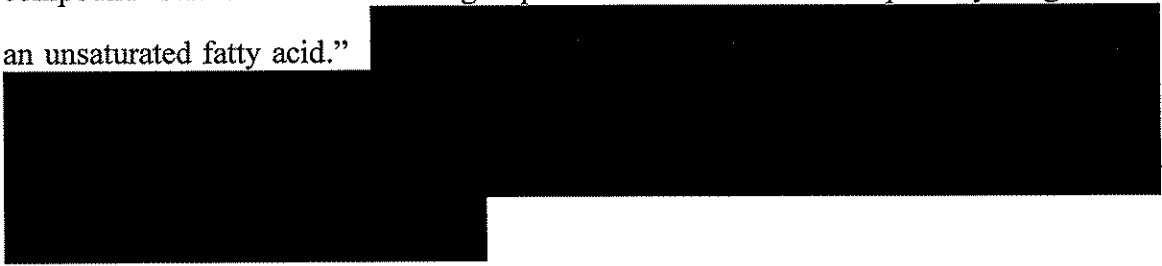
**B. Claim Construction of Markush Group**

The parties also dispute the proper construction of “A base rubber selected from the group consisting of polybutadiene rubber, natural rubber, polyisoprene rubber and styrene-butadiene rubber.” The dispute is whether this claim language allows the base rubber to be composed of more than one of the listed rubbers (i.e., allow blends). Acushnet’s proposed construction would not allow blends, while Bridgestone’s construction would allow blends. (See Ex. 4 – Acushnet’s Opening Claim Construction Brief).



**VII. THE ACCUSED ACUSHNET PRODUCTS DO NOT LITERALLY INFRINGE THE ‘652 PATENT**

The only independent claim in the ‘652 patent is claim 1. Claim 1 requires a rubber composition comprising “about 0.05 to about 2 parts by weight of a sulfur compound” selected from a certain group and “about 25 to about 40 parts by weight of ... an unsaturated fatty acid.”



**A. Bridgestone’s Infringement Methodology**

To determine whether Acushnet’s accused products contain “about 2” parts PCTP and “about 25” parts ZDA, Bridgestone’s expert, Mr. Cadorniga, bases his infringement analysis solely on Acushnet’s manufacturing guidelines manuals. (Ex. 6 – 1/16/07

Cadroniga Report, pg. 10 & B-4-5). Acushnet disputes the propriety of using these guidelines to determine the actual core compositions of its accused golf balls over time. However, because the manufacturing guidelines, when properly interpreted, show that Acushnet does not infringe the '652 patent, the dispute with respect to the guidelines is irrelevant for purposes of this motion. Therefore, for this motion, Acushnet adopts Mr. Cadorniga's infringement methodology of using the strictly the manufacturing guidelines.

**B. Non-Infringement Under the Manufacturing Guidelines**

Under Bridgestone's infringement methodology, relying exclusively on the manufacturing guidelines, none of the Acushnet accused products infringe claim 1 of the '652 patent.

**1. Purity of ZDA-Powder**

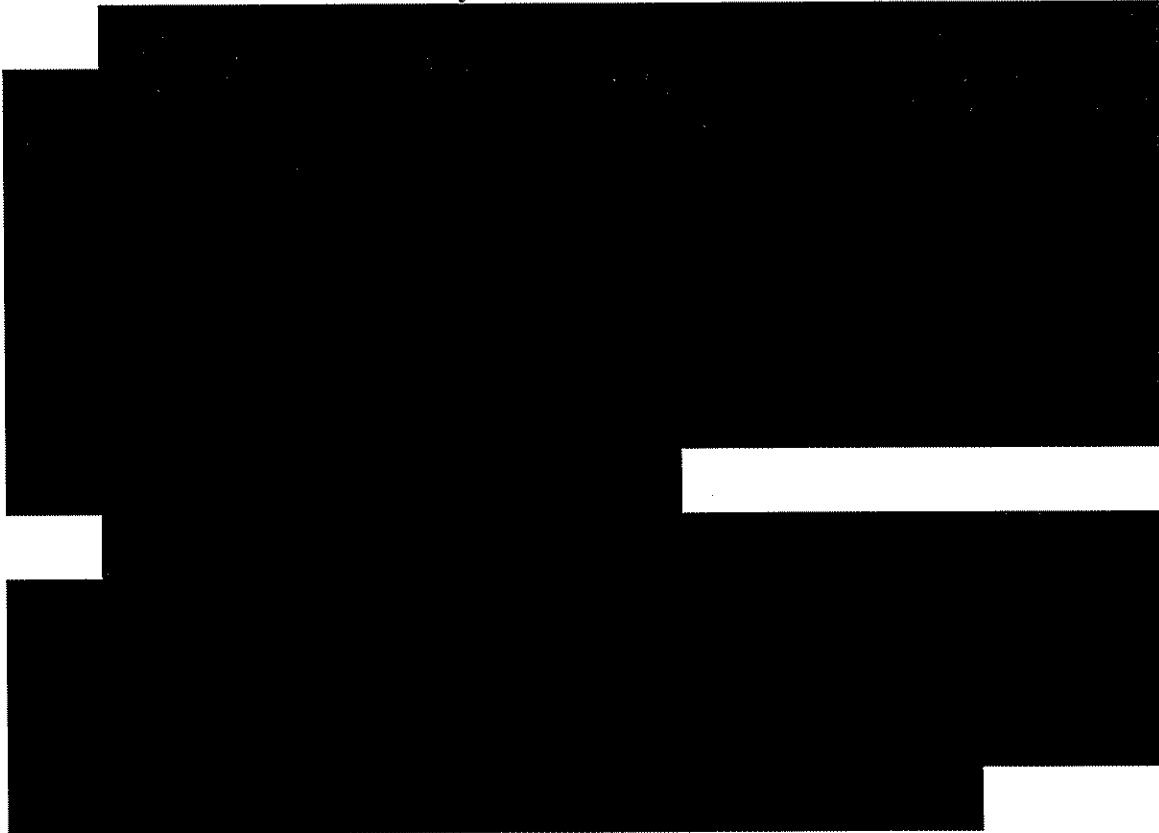
[REDACTED]

After reviewing Mr. Cadorniga's expert report, in which Cadorniga attempts to take into consideration the actual purity level of the PCTP limitation, Dr. Felker inquired into the actual purity of the ZDA powder. In response to that inquiry, [REDACTED]

[REDACTED]

Bridgestone's only argument now to support Mr. Cadorniga's overestimation is that the plainly relevant information obtained by Dr. Felker in his inquiry of the manufacturer should be precluded because it was not produced during fact discovery. As explained in Acushnet's opposition to the Motion for Sanctions (D.I. 323), this purity information was not even in the possession, custody or control of Acushnet during fact discovery, and only became relevant after Mr. Cadorniga submitted his expert report. (*See*, D.I. 323). Thus, there is no basis to excluded this information.

## **2. Purity Of Zn-PCTP Powder**



































## **3. Recalculation of ZDA and PCTP**

Mr. Cadorniga's failure to consider the appropriate purities for the ZDA and Zn-PCTP raw materials, as explained above, leads him to over estimate the amount of ZDA and under estimate the amount of Zn-PCTP in Acushnet's golf balls. Based exclusively on the manufacturing guidelines, and taking into account the proper purity of the ZDA



and Zn-PCTP, it is clear that none of Acushnet's accused products infringe claim 1 (or any other claim) of the '652 patent:

<b>Accused Product</b>	<b>"about 0.05 to about 2 parts by weight of" Zn-PCTP</b>	<b>"about 25 to about 40 parts by weight" of ZDA</b>
Pinnacle Exception (2005-present) Ex. 3a – AB 0015321 – AB 0015337		
Pinnacle Exception (Sept. 2003-Aug. 2005) Ex. 3b – AB 0056201 – AB 0056217		
Pinnacle Exception (May 2003-Sept. 2003) Ex. 3c – AB 0015304 – AB 0015320		
Titleist DT SoLo (Sept. 2004-present) Ex. 3d – AB 0015291 – AB 0015303		
Titleist DT SoLo (Oct. 2002-Sept. 2004) Ex. 3e – AB 0015274 – AB 0015290		
NXT Tour (inner core) (Sept. 2004-present) Ex. 3f – AB 0015408 – AB 0015429		
NXT Tour (outer core) (Sept. 2004-present) Ex. 3f – AB 0015408 – AB 0015429		
NXT Tour (single core) (Oct. 2002-Sept. 2004) Ex. 3g – AB 0015391 – AB 0015407		
NXT Ex. 3h – (Oct. 2004-present) AB 0015356 – AB 0015373		
NXT (Oct. 2002-Oct. 2004) Ex. 3i – AB 0015338 – AB 0015355		
ProV1x (inner core) (all years) Ex. 3j – AB 0015471 – AB 0015497		

Accused Product	"about 0.05 to about 2 parts by weight of" Zn-PCTP	"about 25 to about 40 parts by weight" of ZDA
ProV1x (outer core) (all years) Ex. 3j – AB 0015471 – AB 0015497		
ProV1* (inner core) (all years) Ex. 3k – AB 0086603 – AB 0086626		
ProV1* (outer core) (all years) Ex. 3k – AB 0086603 – AB 0086626		
Pro V1 392 (Nov. 2004-present) Ex. 3l – AB 00 38532 – AB 0038560		
Pro V1 392 (Nov. 2002-Nov. 2004) Ex. 3m – AB 0015542 – AB 0015562		

### C. Bridgestone Improperly Deals With Dual Core Balls

Claim 1 of the '652 patent reads: "A solid golf ball ... *comprising a rubber composition* containing 100 parts by weight of a base rubber ..." (Ex. 1). The claim goes on to require that *the rubber composition* contain certain amounts of ZDA, PCTP and organic peroxide. Therefore, in instances in which a ball contains more than one rubber composition, claim 1 requires that at least one of the multiple rubber compositions meet the required amounts of ZDA, PCTP and organic peroxide.



To infringe claim 1, therefore, at least one of these two rubber compositions would have to be shown to meet the other requirements of the claim related to the amount of ZDA, PCTP and organic peroxide. As shown in the chart above, neither the inner core nor the

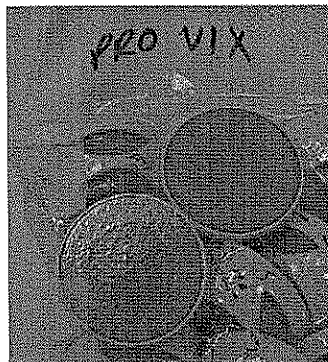
outer core of these balls meet the ZDA and PCTP limitations and therefore, do not infringe the '652 patent.

In reaching his infringement opinion, Mr. Cadorniga relies on combining the inner core and outer core together to reach a conclusion that the multiple rubber compositions contain the required amounts of ZDA and PCTP. This combination, however, is clearly improper in light of the claim language.

The claim specifically states it is limited to "*a rubber composition.*"



Looking at the inside of the Pro V1x 332 golf ball further shows that there are two separate rubber compositions, as shown below:



[REDACTED]

**D. Non-Infringement Based on Use of Blends of Rubbers**

The data attached to the declaration of Jeff Dalton further shows that for substantial time periods [REDACTED]

[REDACTED] Because claim 1 of the '652 patent is properly construed to exclude the use of blends, this provides a further basis for non-infringement during such time periods. (Ex. 15 – 2/20/06 Dalton Decl. Summary Charts).

**VIII. THE ACCUSED PRODUCTS DO NOT INFRINGE THE '652 PATENT UNDER THE DOCTRINE OF EQUIVALENTS**

**A. Prosecution History Estoppel Applies To Prohibit Application Of The Doctrine of Equivalents**

**1. Legal Standards For Analyzing Infringement Under the Doctrine of Equivalents**

The Supreme Court has recently reconfirmed the rule that where, as here, the scope of a claim is narrowed in order to obtain the patent, the patentee is presumed to have conceded an inability to claim the broader subject matter, and will thereafter be estopped to assert infringement under the doctrine of equivalents. *Festo VIII*, 535 U.S. at 740; *Zenith Labs., Inc. v. Bristol-Myers Squibb Co.*, 19 F.3d 1418, 1424 (Fed. Cir. 1994), *cert. denied*, 115 S. Ct. 500 (1994). The analysis of the prosecution history estoppel bar involves three steps. First, the court determines whether the amendment was “narrowing” by comparing the original claim with the amended claim. If the original claim would have captured the alleged equivalent, then the amendment is “narrowing.” *Festo IX*, 344 F.3d at 1366. A claim may be “narrowed” either by amendment during the course of prosecution, or by presenting new claims in order to overcome an examiner’s

rejection. *Builder's Concrete, Inc. v. Bremerton Concrete Prods. Co.*, 757 F.2d 255, 260 (Fed. Cir. 1985).

Second, the court examines the patent's prosecution history to determine if the narrowing amendment was made for reasons "related to patentability." *Festo IX*, 344 F.3d at 1366. It is the *patentee's burden* to establish that the narrowing amendment was not "related to patentability" by reference only to the prosecution history. *Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d 1352, 1356 (Fed. Cir. 2003); *Festo IX*, 344 F.3d at 1366. If the prosecution history reveals that the patentee intended to narrow the claim in order to overcome an examiner's rejection, then prosecution history estoppel will apply. *Id.* Similarly, if the prosecution history reveals *no reason* for the narrowing, then the court shall presume that the amendment was related to patentability, and prosecution history estoppel will apply. *Id.* at 1366-67. The estoppel will apply regardless of whether the narrowing amendment was suggested by an examiner or was voluntarily proffered by the applicants. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 563 (Fed. Cir. 2000) ("*Festo XF*") ("[V]oluntary claim amendments are treated the same as other amendments.").

Third, if the patentee cannot prove that the prosecution history demonstrates that the reason for the amendment was not "related to patentability," then the court determines the scope of the estoppel. In determining the scope of the estoppel, the court begins with the presumption that the patentee intended to surrender *all territory* between the original claim limitation and the as-amended claim. *Festo XIII*, 535 U.S. at 740. "[W]hen amending a claim so as to avoid a rejection based on a particular reference, the skilled patent prosecutor usually seeks to draft an amendment that narrows the claim only as much as is thought necessary to overcome the rejection." *Athletic Alternatives, Inc. v. Prince Mfg., Inc.*, 73 F.3d 1573 (Fed. Cir. 1996). As discussed further below, the

standards for rebuttal are exacting and very rarely have been met by a patentee.<sup>3</sup> See *Festo VIII*, 535 U.S. at 740-41.

## 2. The Prosecution History of the '652 Patent

The '652 patent, entitled "Solid Golf Balls," was filed in the Patent and Trademark Office on May 10, 1990, claiming priority to Japanese patent application no. 2001-119460, filed November 5, 1989. The prosecution history of the '652 patent is long and complex. (Ex. 16 – '652 Prosecution History). During prosecution, the applicants initially attempted to claim a solid golf ball with a base rubber, a crosslinker, and a sulfur compound selected from the group consisting of organic sulfur compounds or metal-containing organic sulfur compounds. As originally filed, claim 1 read as follows:

A solid golf ball comprising a rubber composition containing a base rubber, an unsaturated carboxylic acid metal salt, and a sulfur compound

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<sup>3</sup> In fact, since *Festo VIII* was decided, the Federal Circuit has consistently found, as a matter of law, that the patentee failed to rebut the presumption of total surrender and, therefore, could not establish infringement by equivalents. See, e.g., *Biagro Western Sales Inc. v. Grow More, Inc.*, 423 F.3d at 1306, 1307 (Fed. Cir. 2005) (affirming summary judgment holding that plaintiff did not rebut the presumption of surrender and that prosecution history estoppel barred it from asserting infringement under the doctrine of equivalents); *Research Plastics, Inc. v. Fed. Packaging Corp.*, 421 F.3d 1290, 1299 (Fed. Cir. 2005) (stating that plaintiff could not rebut the presumption and, therefore, affirming summary judgment ruling of non-infringement); *Rhodia Chimie. v. PPG Indus., Inc.*, 402 F.3d 1371, 1383 (Fed. Cir. 2005) (holding that patentee failed to rebut presumption that it surrendered the range between the original and amended claims and, therefore, affirming grant of summary judgment of non-infringement); *Bus. Objects, S.A. v. Microstrategy, Inc.*, 393 F.3d 1366, 1374-75 (Fed. Cir. 2005) (affirming Northern District of California Court's grant of summary judgment of non-infringement under doctrine of equivalents as to two claims because patentee failed to rebut presumption of total surrender but reversing summary judgment ruling that prosecution history estoppel applied to third claim because there was no narrowing amendment); *Glaxo Wellcome, Inc. v. IMPAX Labs., Inc.*, 356 F.3d 1348, 1356 (Fed. Cir. 2004) (affirming Northern District of California Court's grant of summary judgment of non-infringement where patentee failed to rebut the *Festo* presumption); *Talbert Fuel Sys. Patents Co. v. Unocal Corp.*, 347 F.3d 1355, 1360 (Fed. Cir. 2003) (holding that the patentee could not meet the rebuttal criteria required under *Festo VIII*); *Pioneer Magnetics*, 330 F.3d at 1357 (affirming summary judgment ruling of non-infringement under doctrine of equivalents because patentee failed to rebut the presumption of surrender under *Festo VIII*).



selected from the group consisting of an organic sulfur compound and a metal-containing organic sulfur compound. (Ex. 16 – at original claim 1).

The claims did not originally require specific *amounts or types* of sulfur compounds nor did it originally require a specific amount of an unsaturated carboxylic acid. (*Id.*)

In a first Office Action, the examiner rejected original claim 1, as well as claims 3-6 under 35 U.S.C. § 103(a) over U.S. Patent No. 4,770,422 to Isaac (“Isaac ‘422”). The examiner opined that *because claim 1 did not claim the amount of organosulfur compound that is used in the golf ball, it would have been obvious to add a negligible amount of organosulfur compound.* (Ex. 16 – Office Action of 12/12/90 at 4).

The examiner further rejected all claims as failing to satisfy the first and second paragraphs of section 112. (Ex. 16 – Office Action of 12/12/90 at 2). The examiner felt that the advantages of the invention could not be obtained unless the rubber disclosed in the specification was used. Particularly, the examiner pointed out that “[I]t is seen that the performance in the claimed solid golf ball made with the recited ingredients could not be predicted if the rubber used in the golf ball composition were, for example, a polyurethane elastomer.” (*Id.*). In response, Bridgestone presented the following claim:

A solid golf ball comprising a rubber composition containing 100 parts by weight of a base rubber selected from the group consisting of polybutadiene rubber, natural rubber, polyisoprene rubber and styrene butadiene rubber, about 25 to about 40 parts by weight of an unsaturated carboxylic acid metal salt, and about 0.05 to about 2 parts by weight of a sulfur compound selected from the group consisting of an organic sulfur compound and a metal-containing organic sulfur compound, and about 0.5 to about 3 parts by weight of an organic peroxide.

(Ex. 16 – Amendment of 4/12/91).

As shown by this amendment, to overcome a prior art rejection by the examiner, claim 1 of the ‘652 patent was amended to require certain amounts of both organosulfur compounds (i.e., PCTP) and unsaturated fatty acid compounds (i.e., ZDA).

Despite this amendment, the examiner again rejected claims 1 and 3-20 as being obvious over either Isaac ‘422 or U.S. Patent No. 4,683,257 to Kakiuchi et al. (“Kakiuchi

‘257”) in view of U.S. Patent No. 4,556,220 to Tominaga (“Tominaga ‘220”). (Ex.16 – Office Action of 07/08/1991 at 2). Additionally, the examiner rejected claims 1 and 3-20 under § 102(b) as being anticipated by Tominaga ‘220. (*Id.* at pp. 2-3). The examiner indicated that the Tominaga ‘220 reference disclosed all of the claimed features, including the presence of a “polysulfide compound.” (*Id.* at 2).

In response to this rejection, Bridgestone once again amended claim 1 by replacing the term “organic sulfur compound” with “thiophenols and metal salts thereof, and thiocarboxylic acids and metal salts thereof.” (Ex. 16 – Amendment of 10/08/1991 at 1). Bridgestone argued that Tominaga ‘220 disclosed only specific sulfur compounds, and not those sulfur compounds being claimed in the ‘652 patent. (*Id.* at 4). Bridgestone also asserted that “[a]n essential aspect of the present invention is the incorporation of a specific sulfur compound as recited in Applicant’s amended claim 1.” (*Id.* at 5). The declaration filed with the previous response was again used to demonstrate the “unexpectedly superior results” that were achieved using these specific sulfur compounds. (*Id.*)

After a series of yet additional rejections, Bridgestone was finally able to get the examiner to allow their claim; however, the claim as allowed was significantly narrower than the original claim Bridgestone wanted.

### **3. Bridgestone is Estopped to Assert the Acushnet Products Infringe Under the Doctrine of Equivalents**

Following the three step analysis laid out above, first it is clear that the amendments made to claim 1 during prosecution were “narrowing.” If the original claim would have captured the alleged equivalent, then the amendment is “narrowing.” *Festo IX*, 344 F.3d at 1366. Here, the original claim would have certainly captured the accused Acushnet products, because the original claim did not have any limits to the amount of



either organosulfur or unsaturated carboxylic acid components and all of the accused Acushnet products contain some amount of both PCTP and ZDA.

Moving to the second step in the estoppel analysis, the prosecution history of the '652 patent makes it clear that original claim 1 was narrowed for reasons "related to patentability." The examiner rejected Bridgestone's attempts to claim the "organosulfur" and "unsaturated fatty acid" limitations of their invention 5 times during prosecution. Moreover, Bridgestone amended claim 1 three different times during prosecution, each time to overcome prior art rejections by the examiner.

Further, Bridgestone amended claim 1 to require certain amounts of both sulfur compounds and carboxylic acid compounds after the examiner rejected the claim *because claim 1 did not claim the amount of organosulfur compound that is used in the golf ball*. (Ex. 16 – Office Action of 12/12/90 at 4).

Because claim 1 was narrowed for reasons related to patentability, the third step in the analysis is to determine the scope of the estoppel. *Festo IX*, 344 F.3d at 1366.

The doctrine of prosecution history estoppel establishes a presumption that Bridgestone may not assert infringement of a narrowed claim under the doctrine of equivalents against products like those of Acushnet, as such assertion would impermissibly recapture subject matter surrendered during prosecution.

[Where] the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, he may not argue that the surrendered territory comprised unforeseen subject matter that should be deemed equivalent to the literal claims of the issued patent ...

*Festo VIII*, 535 U.S. at 734. A rejection indicates that the patent examiner does not believe the original claim could be patented. While the patentee has the right to appeal, his decision to forgo an appeal and submit an amended claim is taken as a concession that the invention as patented does not reach as far as the original claim. *Id.*

Because Bridgestone added the specific amount limitations to overcome the prior art rejection of the examiner, Bridgestone is presumed to have surrendered all equivalents with the claim scope outside the narrowed ranges. Bridgestone is presumptively estopped to assert that Acushnet's products are an equivalent to claim 1.

#### **4. Bridgestone Cannot Rebut the Presumption of Surrender**

Once it is established that prosecution history estoppel applies, the court presumes that the patentee intended to surrender all territory between the original claim and the amended claim. *Festo IX*, 344 F.3d at 1367. "[W]hen amending a claim so as to avoid a rejection based on a particular reference, the skilled patent prosecutor usually seeks to draft an amendment that narrows the claim only as much as is thought necessary to overcome the rejection." *Athletic Alternatives*, 73 F.3d at 1582.

Thus, when the patentee has chosen to narrow a claim, courts must presume that the amended text "was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed." *Festo VIII*, 535 U.S. at 741. It is the patentee's burden to rebut the presumption of total surrender by demonstrating that it did not surrender the particular equivalent in question. *Id.* The presumption of surrender can only be rebutted in very limited circumstances:

A patentee may rebut the presumption of surrender by showing that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent. *Biagro*, 423 F.3d at 1306. Specifically, the presumption may only be overcome if: (a) the equivalent was unforeseeable at the time of the application; (b) the rationale underlying the amendment bears no more than a tangential relation to the equivalent in question; or (c) there was some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question." *Festo VIII*, 535 U.S. at 740-41.

Rebuttal of the presumption is a question of law to be determined by the court. *Festo IX*, 344 F.3d at 1368. If Bridgestone fails to rebut the presumption, then prosecution history estoppel bars it from relying on the doctrine of equivalents.

**a. Including a Range Greater Than “About 2” PCTP or Less Than “About 25” ZDA Was Not Unforeseeable**

If a patentee can prove that, due to changes in technology between the time the asserted patent claims were filed and the equivalent was generated, the alleged equivalent was “unforeseeable at the time of the amended and thus beyond a fair interpretation of what was surrendered,” it may overcome the presumption of surrender. *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1140 (Fed. Cir. 2004).

Mr. Cadorniga, Bridgestone’s expert, testified that the reason that the inventors did not claim a higher range than “about 2” parts by weight of PCTP was not that such a range was unforeseeable, but rather that the inventors **“did not do their homework completely.”** (Ex. – 3/12/07 Cadorniga Tr. 98:9-22) (emphasis added). Mr. Cadorniga elaborated on this point and further stated that the inventors did not claim a higher range because the PCTP material is “expensive”:

That I said is that they did not complete their whole study on the process. They created one at the lower end. And I think it’s all logistics, okay? If I can make it work at that end, because it’s an expensive material, then I don not have to spend other materials to into the process. So they believe, that you know, it’s enough to maintain that study at that level.

(Ex. 8 – 3/12/07 Cadorniga Tr. 99:7-15).

Mr. Cadorniga then expressly stated that had it been him filing the patent application, he would have claimed a range greater than “about 2”:

“No, it only occurred to me that they did not complete their work. It should have been when they cover up to about two, okay, ***I would have expand that study to create a study using a greater number above two or about 2, in that range.***”

(Ex. 8 – 3/12/07 Cadorniga Tr. 99:20-100:2).

The fact that the inventors “did not do their homework” or that the PCTP material is “expensive” does not make claiming a range above “about 2” PCTP or less than “about 25” ZDA unforeseeable.

Where, as here, the patentee tried to prosecute claims that would have covered the alleged equivalent in an earlier claim, “the patentee cannot assert that he lacked the words to describe the subject matter in question.” *Festo VIII*, 535 U.S. at 734. In short, one of ordinary skill in the art, like Mr. Cadorniga, could well have foreseen and claimed ranges above “about” and less than “about 25.” The decision not to do so was deliberate and clear to any person of ordinary skill in the art reading the patent. By narrowing the claims, the applicants provided to the public a clear record: “the prosecution history has established that the inventor turned his attention to the subject matter in question, knew the words for both the broader and the narrower claim, and affirmatively chose the latter.” *Festo VIII*, 535 U.S. at 734-35.

**b. A Range Greater Than “About 2” PCTP  
or Less Than “About 25” ZDA is Not  
“Merely Tangential”**

The second way a patentee may rebut the presumption of estoppel is by proving that the rationale underlying the narrowing amendment bears no more than a “tangential” relation to the equivalent in question. *Festo VIII* at 740. An amendment is “merely tangential” if “the reason for the narrowing amendment was peripheral, or not directly relevant, to the alleged equivalent.” *Rhodia Chimie*, 402 F.3d at 1383. In attempting to rebut the presumption of surrender by arguing that the same argument was “merely tangential,” the patentee must rely only on the intrinsic record. *Biagro*, 423 F.3d at 1306.

In this case, the intrinsic record unequivocally reveals that the amendment to include the specific ranges of amounts for PCTP and ZDA was directly related to overcome the prior art cited by the examiner. Bridgestone amended claim 1 to require certain amounts of both sulfur compounds and carboxylic acid compounds after the

examiner rejected the claim in light of prior art *“because of their failure to recite the quantities of ingredients present.”* (Ex. 16 – Office Action of 12/12/90 at 4) (emphasis added). Thus, the intrinsic record demonstrates that the amendment that narrowed the claim limitation to recite the specific claimed ranges was not “merely tangential.”

After amended its original claim and inserting specific claimed ranges for the sulfur compound and ZDA, Bridgestone asserted to the examiner that *“[a]n essential aspect of the present invention is the incorporation of a specific sulfur compound as recited in Applicant’s amended claim 1.”* (Ex. 16 – Amendment of 10/08/1991 at 5) (emphasis added). Therefore, Bridgestone made it clear that the specific range of the sulfur compound (i.e., PCTP) was “essential.”

Furthermore, where the patentee could have overcome prior art rejections by drafting claims which disclaimed the prior art, but which also captured the claimed equivalent, it cannot later overcome its failure to do so by reliance on the doctrine of equivalents. *Research Plastics*, 421 F.3d at 1298 (holding that patentee “could have claimed [the accused device structure], so long as it disclaimed the [prior art structure]”)

Nothing the in the record here would have prohibited Bridgestone from responding to the examiner’s rejection based on the Issac ‘422 prior art patent by claiming a broader range for the PCTP or ZDA limitations.

Moreover, because the burden of overcoming the presumption of surrender is on the patentee, even if the intrinsic record does not reveal the reason for the amendment, Bridgestone cannot rebut the presumption of surrender. Where the prosecution history is silent on the reason for the amendment, the patentee cannot rebut the presumption of surrender of subject matter between the original application and the amended limitation. *Biagro Western Sales Inc. v. Grow More, Inc.*, 423 F.3d 1306 (Fed. Cir. 2005). In *Biagro*, the patentee argued that the rationale for a narrowing amendment was “merely tangential” because only the lower limit of the claimed range of 30 to 40 percent was necessary to distinguish over the prior art, and that the upper range limit was not

necessary to obtain the patent. *Id.* The Court rejected this argument, holding that the prosecution history was silent on the reason for the upper limit in the amended claim, and thus the patentee could not rebut the surrender presumption. The patentee was barred from asserting the doctrine of equivalents as a matter of law. *Id.*

**c. There is No Other Explanation For the  
Narrowing Amendment**

The third way the presumption of surrender of all equivalents can be overcome is if there exists “some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question.” *Festo VIII*, 535 U.S. at 741. However, in rebutting the presumption, Bridgestone must base its arguments:

Solely upon the public record of the patent’s prosecution, i.e., the patent’s prosecution history. To hold otherwise - - that is, to allow a patent holder to rely on evidence not in the public record to establish a reason for an amendment - - would undermine the public notice function of the patent record. If the reasons for the amendment do not appear in the public record of the patent’s prosecution, the reasons in most cases will be known only to the patent holder. We therefore hold that a narrowing amendment will give rise to prosecution history estoppel unless the prosecution history of the patent reveals that the amendment was made for a purpose unrelated to patentability concerns.

*Festo VI*, 234 F.3d at 586. When a patentee is unable to explain away his narrowing of claims by reference only to the prosecution history, the presumption prevails, and the patentee is prohibited from asserting infringement. *Festo VIII*, 535 U.S. at 740.

Here, no explanation appears from the intrinsic record other than that the patentee knowingly narrowed its claims to obtain issuance of the patent with “about 2” parts by weight of a sulfur compound, such as PCTP and “about 25” parts by weight of an unsaturated carboxylic acid, such as ZDA. Accordingly, Bridgestone cannot overcome the presumption that the applicants intended to disclaim the subject matter that they excluded when they amended the claims in their application.



**B. Bridgestone's Failure to Disclose Infringement Contentions Precludes Them From Relying on the Doctrine of Equivalents**

To the extent Bridgestone is able to rely on the doctrine of equivalents argument contained in Mr. Cadorniga's report, Bridgestone should still be precluded from asserting infringement under the doctrine of equivalents.

Bridgestone should be precluded because it failed to identify the factual bases in support of any such argument in response to Acushnet's contention interrogatories. (*See* D.I. 295 at 6-8 and Ex. Q). Throughout fact discovery, Bridgestone stated verbatim in its contentions that "to the extent the claim is not literally infringed, it is infringed under the Doctrine of Equivalents, because any difference would be insubstantial." (D.I. 295 at Ex A). It offered no greater detail, pointed to no specific evidence in support of this contention, and certainly provided no notice for the assertion it makes for trial purposes, after the close of fact discovery, that "about 2" can include up to "over 3" (Ex. 8 – 3/12/07 Cadorniga Tr. 118:7-12) and "about 25 to about 40" can include 17 to 50. (Ex. 8 – 3/12/07 Cadorniga Tr. 115:10-116:14). In such a case, preclusion is the appropriate remedy. *See* Fed. R. Civ. P. 37(b)(2); *Wesley-Jessen Corp. v. Pilkington Visioncare*, 844 F. Supp. 987, 990 (D. Del. 1994) ("the Court will not allow it to offer into evidence in its case in chief any documents or testimony supporting that contention that are not disclosed in its response"); *Dependahl v. Falstaff Brewing Corp.*, 84 F.R.D. 416, 420 (E.D. Mo. 1979) (striking defense and counterclaim for failure to answer contention interrogatory); *King v. E.F. Hutton & Co.*, 117 F.R.D. 2, 7 n.6 (D.D.C. 1987) (plaintiffs "will be precluded from testifying at trial to any facts in support of the losses not mentioned in their respective depositions or answers to interrogatories"); *Auto Meter Prods. v. Maxima Techs. & Sys., LLC*, 2006 U.S. Dist. LEXIS 81687, at \*10 (N.D. Ill. Nov. 6, 2006) ("[a]ny facts or documents not so disclosed cannot be relied upon in this case") (Ex. 17). Thus, in light of Bridgestone's failure to provide the factual bases for its doctrine of equivalence contentions, it should be precluded from asserting this now.

## IX. CONCLUSION

For all of these reasons, Acushnet requests that its motion be granted.

POTTER ANDERSON & CORROON LLP

### OF COUNSEL:

Alan M. Grimaldi  
Joseph P. Lavelle  
Kenneth W. Donnelly  
Brian S. Seal  
HOWREY LLP  
1299 Pennsylvania Avenue, N.W.  
Washington, DC 20004  
Tel: (202) 783-0800

By: /s/ David E. Moore

Richard L. Horwitz (#2246)  
David E. Moore (#3983)  
Hercules Plaza, 6<sup>th</sup> Floor  
1313 North Market Street  
P. O. Box 951  
Wilmington, DE 19899-0951  
Tel: (302) 984-6000  
rhorwitz@potteranderson.com  
dmoore@potteranderson.com

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790684 / 28946

*Attorneys for Defendant  
Acushnet Company*



**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

**CERTIFICATE OF SERVICE**

I, David E. Moore, hereby certify that on April 20, 2007, the attached document was hand delivered to the following persons and was electronically filed with the Clerk of the Court using CM/ECF which will send notification to the registered attorney(s) of record that the document has been filed and is available for viewing and downloading:

Jack B. Blumenfeld  
Maryellen Noreika  
Leslie A. Polizoti  
Morris, Nichols, Arsht & Tunnell  
1201 N. Market Street  
Wilmington, DE 19801

I hereby certify that on April 20, 2007, I have Electronically Mailed the documents to the following:

Robert M. Masters  
Paul, Hastings, Janofsky & Walker LLP  
875 15<sup>th</sup> Street, N.W.  
Washington, D.C. 20005  
[RobMasters@paulhastings.com](mailto:RobMasters@paulhastings.com)

/s/ David E. Moore  
Richard L. Horwitz  
David E. Moore  
Potter Anderson & Corroon LLP  
Hercules Plaza – Sixth Floor  
1313 North Market Street  
P.O. Box 951  
Wilmington, DE 19899-0951  
(302) 984-6000  
[rhowitz@potteranderson.com](mailto:rhowitz@potteranderson.com)  
[dmoore@potteranderson.com](mailto:dmoore@potteranderson.com)